

HOW TO...

Create a 3D animation

3D modelling is a difficult skill to master, but with the help of **Cliff Joseph** and Carrara Studio – included on this month's cover disc – we can get you started

CARRARA STUDIO 2.1



Most 3D graphics software is so expensive that you need a Hollywood blockbuster budget to pay for it.

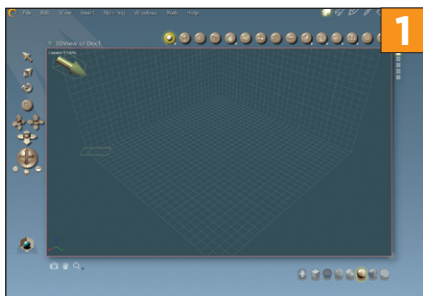
However, Eovia's Carrara Studio provides powerful 3D graphics tools for less than £500 – or, in this case, completely free as the full version of Carrara Studio is on this month's cover disc.

The program has a unique interface divided into five 'rooms', which you access using the icons in the top right-hand corner of the screen. Each room provides tools that allow you to focus on one aspect of the 3D design process. You start work in the Assemble room, where you gather together your 3D objects and move them around to create your 3D scene. Then you move into the Model room, where you can fine-tune individual objects. The Texture room allows you to add realistic texture effects, such as glass or steel, to give your graphics a professional finish.

If you're feeling really ambitious you can move into the Storyboard room, in which you can create complex animation sequences. When you've finished you step into the Render room and tell Carrara to create a complete 3D animated movie, just like the Hollywood pros.

To help, Carrara includes lots of ready-made 3D objects, along with special effects and even predefined animation controls, so it's easy to create eye-popping 3D graphics and animation.

1 You start work in Carrara Studio by creating a new 'scene' in the Assemble room. The scene displays a 3D workspace where you can create your 3D graphics and move them around any way you want.



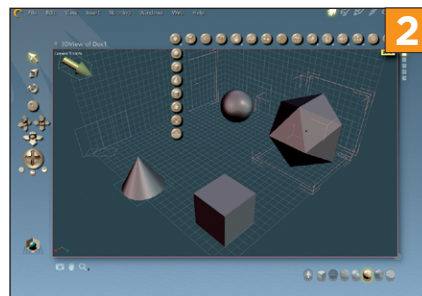
Running along the top of the workspace are the main tools you'll need to select and create 3D objects, as well as add special effects such as flames, clouds or explosions. A set of 'camera' controls to the left of the scene window enable you to view your scene from different angles.

2 Click on the first button on the left at the top of the workspace and you'll see a set of 'primitives' that you can add to your scene. Primitives are basic geometrical shapes such as spheres, cubes, cones and cylinders. You can experiment with these shapes to get a feel for the program, but there's not much you can do with a bunch of cubes and spheres, so we'll look at some more sophisticated modelling features.

3 Click on the blue marker on the far left-hand side of the screen to open Carrara's Browser window. To help you get started, the Browser includes a number of ready-made 3D graphics that you can drop into your scene.

The different types of graphics include 'metaballs'. These are like lumps of digital clay that you can stretch and twist into a variety of different shapes, allowing you to create more realistic shapes than you can get from using simple primitives. Start by playing with the model of a ghost.

4 Creating 3D shapes is just the first step in the design process. You also need to apply texture effects to the surface of your models to make them look more realistic. You can do this in the Texture room, which you switch to by



clicking on the paintbrush icon, or use the ready-made textures that are built into the Browser to speed things up.

The Browser includes dozens of predefined texture effects – known as 'shaders' – including shiny metallic effects, transparent glass, marble, ice and snow. To add a shader to an object, click on the paintbrush icon in the turquoise circle at the top of the Browser window and drag the shader from the Browser.

5 To fine-tune the shape of your models, click on the spanner icon in the top-right corner of the screen. This takes you into the Model room, where you can edit individual models. As you're working in three dimensions it can help to switch to a split-screen view, which displays your model from all angles.

The six buttons above the workspace provide tools that enable you to stretch and distort your model, using the mouse to mould it like clay.

6 The trickiest part of 3D work for most people is creating animation effects. Experienced users can switch to Carrara's Storyboard room to set up their animation sequences by clicking on the film strip icon at the top-right of the screen, but beginners can turn to the Browser once again.

Among its features, the Browser includes a series of predefined animation sequences. You can make your models spin on the spot, bounce around the screen or move in parallel with other animated objects. Just click on the effect you need and drag it on to your model.

